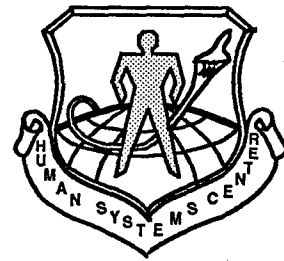


HSC/DR-TM-94-0001

Measuring Customer Satisfaction

August 1994

Capt Eileen G. Ancman



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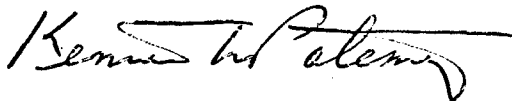
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## NOTICES

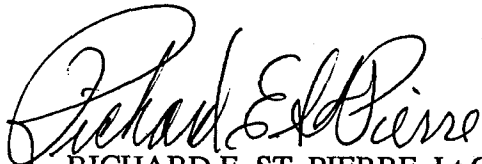
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The Office of Public Affairs has reviewed this report, and it is releasable to the National Technical Information Service, where it will be available to the general public, including foreign nationals.

This report has been reviewed and is approved for publication.



KENNETH W. POTEMPA, GM-14  
Chief, Studies and Analysis Division



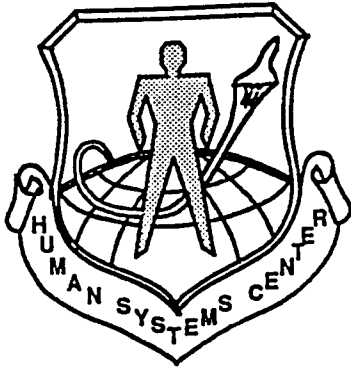
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# REPORT DOCUMENTATION PAGE

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# MEASURING CUSTOMER SATISFACTION

BY

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HSC/XRS  
BROOKS AFB TX

AUGUST 1994

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## **1.0 OBJECTIVE**

The Human Systems Center's Study and Analysis Division (HSC/XRS) would like to develop a metric to measure our customers' satisfaction. Customer feedback is the cornerstone for improving our work performance. The vehicle used to measure customer satisfaction should be easy to administer as well as easy to understand. It should be realistic and be used as a tool for continuous improvement of services.

## **2.0 BACKGROUND**

### **2.1 Our Way of Life**

Total Quality Management (TQM) is a "way of life" for the Air Force. Striving to do a better job while meeting our customers' needs is the critical tenet behind TQM. To ensure that we are accomplishing this tenet, one must query the customer. One key way is through the implementation of a metric and seeing how we measure up to it. Especially in these times of tight budgets, it is critical that we get feedback from users to ensure that they are getting the most from their limited resources. But, what should be measured and how should we go about measuring it? Our office has been struggling with this concept for over two years.

### **2.2 What Our Office Does**

HSC/XRS deals with long range developmental planning, pre-acquisition studies, modeling, and cost analyses. The majority of our work are paper studies per the request of users, such as MAJCOMs. Topics range the full gamut of early acquisition studies in human-centered areas. Some studies are of short duration, lasting less than a year, with most averaging about two years. Studies do not regularly lead to HSC follow-ons due to the nature of the topics; usually action taken as a result of a study will not fall under the HSC mission.

### **2.3 Developing The Metric**

To develop a viable metric for HSC/XRS, the author decided to first query co-workers throughout XR as to what should go into the metric and how it should be administered. A questionnaire was the approach the author chose to use. A literature search, delving into what our industry counterparts are doing, also was used to help form our metric and the means to measure it. Discussions with the HQ HSC TQM focal point, Ms Virginia Moody, provided valuable insight. Also a three month collection of customer satisfaction questionnaires received from both industry and DoD was compiled for analysis and helped form the foundation of this effort.

## **3.0 METHOD**

### **3.1 The Questionnaire**

Attachment 1 contains the questionnaire developed by the author to query individuals on what they think should be in the XRS Customer Satisfaction Metric. Her questionnaire was tested for continuity by Maj Sipes, a PhD Psychologist, working in HSC/XR. She also discussed it with Survey Control, Randolph AFB; a survey control number was not required per their discretion.

### 3.2 Test Population

The questionnaire was sent out to 26 individuals throughout HSC/XR, both military and civilians. Ten work days were given each recipient to complete the survey. The questionnaire was also faxed to a focal point at HQ AMC. This key point of contact of the author's at HQ AMC answered the questionnaire, providing the user's perspective.

## 4.0 RESULTS

Results from XR and the customer, HQ AMC, are broken out and described below.

### 4.1 XR Results

20 completed surveys were returned. This is a return rate of 77%. The following responses were received:

#### 4.1.1 Question 1: How often should customer satisfaction be measured via questionnaires, etc.?

<u>Response</u>	<u>% of Respondents</u>
End of effort only .....	24.0%
Quarterly .....	9.5%
At key milestones .....	57.0%
No item checked - only comments .....	9.5%

One person marked two entries ("end of effort only"/"at key milestones"); therefore above statistics are based on 21 responses rather than 20. 60% of the people marking "end of effort only" also had a comment, such as: "or end of year"; "or every other year which ever comes first". One person who marked "at key milestones" entered a comment on their questionnaire: "would suggest this for long studies - for shorter studies, possibly mid and end of study". Of the two respondents with only comments, the following were their responses: "should be no longer than 1 year nor more frequent than quarterly"; "depends on goals...all are applicable".

#### 4.1.2 Question 2: Give three key issues that should be addressed.

<u>Response</u>	<u>% of Respondents</u>
Cost .....	6.9%
Performance .....	6.9%
Schedule/Timeliness .....	20.3%
Responsive to/satisfaction of needs and expectations .....	19.6%
Are any changes required .....	1.7%
Courtesy/bed side manner/helpfulness .....	5.1%
Subject matter experts .....	1.7%
Individual initiative .....	1.7%
Do we do follow-ups without customer request .....	1.7%
Quality .....	6.9%
Is the product useful/valuable .....	6.9%
Are all stakeholders involved in study .....	1.7%

Does product present salient points .....	1.7%
Incorporation of customer info .....	3.5%
Are documented requirements fully addressed .....	1.7%
Customer kept "in-the-loop" .....	1.7%
Constructive criticisms/suggestions for improvement .....	3.5%
Willingness to work concerns .....	1.7%
Level of concern .....	1.7%
Value of work by XRS versus competitor .....	1.7%
Dissatisfaction/problems .....	1.7%

One person gave four responses and one person did not give any; therefore, above statistics are based on 58 responses rather than 60.

**4.1.3 Question 3: Rank order the following in order of importance (1 for most importance--7 for least) of what should be included in any survey regarding customer satisfaction.**

<u>Response</u>	<u>Average Value</u>	<u>% of Respondents</u>	
		<u>Listing as #1</u>	<u>Range</u>
XR's management of effort .....	4.5 .....	5% .....	1 - 7
Customer's needs addressed .....	1.5 .....	75% .....	1 - 4
Customer's request for follow-on work .....	4.9 .....	0 .....	2 - N/A
Willingness of customer to spend own money .....	5.6 .....	0 .....	3 - N/A
Timeliness of XR .....	3.4 .....	0 .....	2 - 6
Use of results by customer .....	4.3 .....	10% .....	1 - N/A
A, B or C of item #2 .....	- .....	10% .....	1 - 7

Not applicable (N/A) was counted as a 7. 14 people gave responses, some more than one (total of 18 responses), to the last item, "A, B or C of item #2"; therefore the average value was not listed to avoid confusion. But, of the people that did answer this question, their average value was 3.4. Two people gave "A, B or C of item #2" a value of 1; their responses were: "Quality" and "Schedule/Cost/Performance/Responsiveness". Six people gave "A, B or C of item #2" a value of 2; their responses were: "Quality" (x3), "Incorporation of customer info", "Helpfulness", and "Cost/Performance". For the remaining six people, all but one had their "A, B, or C of item #2" already listed in this question.

**4.1.4 Question #4: What rank or position should you send the survey to? Does it make a difference, as long as you send it to the primary customer? Why?**

20% of the respondents said that the survey should go to a high ranking officer (Col or above). 60% of the respondents said that the person with intimate knowledge/the actual user should get the survey; one quarter of this sub-group said that the supervisor should also get the survey. The remainder of the comments were: "to the two letter"; "depends on the target population", "tasking office".

Regarding whether or not it makes a difference to whom you send the survey, the following comments were received: "people are people, rank or no rank"; "high enough for the big picture, low enough for knowledgeable input"; "you do not want a lieutenant answering the survey, they do not control funding"; and "actual user regardless of rank". Most respondents did not answer this part of question #4.

**4.1.5 Question #5: Are customer surveys a valid way of determining what the customer thinks? Do you think they are fire-walled?**

60% of the respondents claimed that surveys are valid. One person who claimed that surveys were valid also stated that you need to, "follow-up with a teleconference". 20% described them as so-so. 20% said that surveys are not valid. Comments received were, "theory yes, reality no"; "we are over-doing it"; "but if really unhappy, they will tell you"; "surveys tell you more than person-to-person"; "limited use, just a snapshot of what they feel at the moment"; and "I think many people blow them off (but not me on this survey) and even the conscientious often don't have the time or skills to accurately communicate the whole picture".

Not everyone answered the second part of this question. 10% answered that they did not know what the word "fire-walled" meant (these two people were civilians). 25% said that they were fire-walled often while 20% said they were not. A comment received was: "if anonymous or voluntary name, fire-walling may not occur".

**4.1.6 Question #6: What else besides survey forms could we use to measure customer satisfaction? Which do you prefer?**

45% said that you should ask them personally: "eye-ball to eye-ball discussion with point 'how did we do' and 'how can we improve' discussions"; "ask if they are using survey findings"; and "inquire if what we are doing is to their liking". 10% said that we should strive towards a metric that is quantitative, "did they request more work from us"; "did they change what they were doing or going to do"; "response time to requests"; "number of contacts/problems solved". Other comments were: "survey forms are the best"; "I wish I knew something to suggest, there are already too many customer surveys going around"; and "good luck".

**4.1.7 Question #7: Comments:**

The following comments were received: "what does industry use?"; "one bad comment doesn't mean to make drastic changes"; "survey can provide a feedback loop"; "what empowerment are you given to make changes from your survey results -- we can not change regs and systems"; "perhaps developing a verbal survey or checklist -- verbally discussing customer satisfaction with the customer at key points"; "keep survey short"; "nice effort"; and "good luck".

**4.2 User Response**

The user felt that customer satisfaction should be measured both at key milestones and at the end of the effort. Regarding key issues that should be addressed, the user weighed all six of the following as equally important: "customer's needs met"; "communication"; "timeliness"; "periodic updates"; "scheduling"; and "program management". The user also felt that rank did not have anything to do with this type of questionnaire: "when we've received them in the past at senior officer level, they just send it back to the action officer because we deal with the provider more than them". The user felt that customer satisfaction surveys are valid, but also recommended that a follow-up a year later may help. In response to Question #7, the user made reference to the author's primary program, Passenger Smoke and Fume Protective Device (PSFPD): "You've done a great job on PSFPD.....Thanks!"

## 5.0 DISCUSSION

### 5.1 XRS Guidelines

After compiling the raw data, the author handed it to her co-workers in XRS for their comments. A set of guidelines were generated. XRS personnel unanimously agreed on the following guidelines:

5.1.1 Use Questionnaire with Follow-up. Although not perfect, a properly worded questionnaire with frequent up-dating can allow the customer to provide adequate feedback. Personalizing the questionnaire with a phone call within two weeks of sending the questionnaire, will hopefully insure a good response rate plus generate additional quality feedback.

5.1.2 Administer at Key Milestones. Not all key milestones warrant a questionnaire for feedback. Also, end of effort will be counted as a key milestone and should warrant a mandatory questionnaire.

5.1.3 Keep Questionnaire Short. Questionnaire should not exceed one page in length.

5.1.4 Ensure Compatibility with Front Office. Apparently other organizations on Brooks are using a 1-6 rating scale on questionnaires. This currently used format allows for no middle ground, as would an odd numbered scale.

5.1.5 Send to Highest Person with Working Knowledge of Project.

5.1.6 If Customer is Upset, Rectify Problem and Re-send Survey. This should take place as quickly as possible; if problem is not solvable within the month, contact should be made with customer advising them of the steps taken to alleviate the problem.

### 5.2 Developing the Questionnaire

Based on the raw data, a questionnaire was prepared to measure customer satisfaction. It was limited to one page, with only 4 questions plus one section for comments (see Attachment 2). The title of "Customer Feedback" was chosen to stimulate a dialog between the customer and XRS, rather than just rating their satisfaction. The first three questions combine the salient points raised by in the raw data. These yes/no questions also leave room for comments. The last question used the Brooks 1-6 rating scale. It was felt that this could be used as the over-all score if we were tasked to report the metric. By asking for "constructive feedback", rather than just for comments, we can pin the customer down to providing useful, valuable information that can be used to improve our services.

## 6.0 CONCLUSION

6.1 We will implement a survey to measure customer satisfaction. We will join the millions of others throughout industry and the government trying to improve their services through user feedback. But we realize that this is a living document. It must be changed if we are not getting the type of responses that are useful. We must also keep in mind that we need to up-date the survey if our mission changes, user feedback dictates so, etc.

6.2 This effort will help our office meet one of seven published Air Force Materiel Command Total Quality Management objectives:

6.2.2 "...develop a series of metrics by which we will be able to assess our progress."<sup>1</sup>

6.3 Comments on this study/survey are appreciated.

## **7.0 REFERENCES**

Gerson, Richard F. (1993). Measuring Customer Satisfaction. Published by Crisp Publications, Inc.

Keiser, Allyn (1993). "Keeping the Customer Satisfied Begins with Asking Questions". Bank Management v69, pp 48-51

Pfau, Bruce (1993). "Surveys Used as Weapons in Fight for Survival". National Underwriter v97, pp11-12

US Air Force Materiel Command pamphlet (1992), An Introduction to Total Quality Management in Air Force Materiel Command

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<sup>1</sup>US Air Force Materiel Command pamphlet (1992). An Introduction to Total Quality Management in Air Force Materiel Command pp5

**ATTACHMENT 1:**

**Questionnaire For Co-workers and Customers**

## DEVELOPMENT OF A CUSTOMER SATISFACTION METRIC

Questionnaire authored by: Capt Eileen Ancman  
HSC/XRS, Brooks AFB TX  
DSN240-4456

PLEASE RETURN BY: \_\_\_\_\_

Name w/rank: \_\_\_\_\_  
Organization/phone: \_\_\_\_\_

The Studies and Analysis Division, HSC/XRS, of Brooks AFB desires to develop a metric to measure customer satisfaction. Your answers to the following questions will help us in this endeavor and are greatly appreciated.

1. How often should customer satisfaction be measured via questionnaires, etc.?

end of effort only \_\_\_\_\_  
quarterly \_\_\_\_\_  
at key milestones \_\_\_\_\_  
other \_\_\_\_\_

2. Give three key issues that should be addressed:

a. \_\_\_\_\_  
b. \_\_\_\_\_  
c. \_\_\_\_\_

3. Rank order the following in order of importance (1 for most important -- 7 for least) of what should be included in any survey regarding customer satisfaction :

_____ XR's management of effort	_____ timeliness of XR
_____ customer's needs addressed	_____ use of results by customer
_____ customer's request for follow-on work	
_____ willingness of customer to spend own money to attend meetings, etc.	
_____ A, B, or C of item #2 (circle which applies, if any)	

4. What rank or position should you send the survey to? Does it make a difference, as long as you send it to the primary customer? Why?

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5. Are customer surveys a valid way of determining what the customer thinks? Do you think they are fire-walled?

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6. What else besides survey forms could we use to measure customer satisfaction? Which do you prefer?

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7. Comments:

ATTACHMENT 2:

Customer Satisfaction Questionnaire

## CUSTOMER FEEDBACK

Date: \_\_\_\_\_

HSC/XRS Effort: \_\_\_\_\_

HSC/XRS Program Manager: \_\_\_\_\_ Phone: \_\_\_\_\_

Customer's Name: \_\_\_\_\_ Phone: \_\_\_\_\_

Customer's Organization/Address: \_\_\_\_\_

Major Milestone: \_\_\_\_\_

1. Were your needs/expectations met at this milestone? (YES / NO) If not, please explain.

\_\_\_\_\_

\_\_\_\_\_

2. Did we keep you in the loop, utilizing a courteous demeanor? (YES / NO) If not, please explain.

\_\_\_\_\_

\_\_\_\_\_

3. Was the information provided both timely and useful? (YES / NO) If not, please explain.

\_\_\_\_\_

\_\_\_\_\_

4. Please rate your overall satisfaction level.

unsatisfied 1    2    3    4    5    6 satisfied

5. Please use the remainder of this form to provide constructive feedback, allowing us to serve you better: